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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,015	12/21/2004	Pascal Leclerc	034299-613	7248
7590	06/21/2006		EXAMINER	
Robert E Krebs Thelen Krebs & Priest P O Box 640640 San Jose, CA 95164-0640			SONG, SARAH U	
			ART UNIT	PAPER NUMBER
			2874	

DATE MAILED: 06/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

HA

Office Action Summary	Application No.	Applicant(s)	
	10/519,015	LECLERC ET AL.	
	Examiner	Art Unit	
	Sarah Song	2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2006.
- 2a) ☐ This action is **FINAL**.
- 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10 and 18 is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-17 and 19-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some * c) ☐ None of:
 - 1. ☐ Certified copies of the priority documents have been received.
 - 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's communication filed on April 17, 2006 has been carefully studied by the Examiner. The arguments advanced therein, considered together with the amendments made to the claims, are persuasive and the rejections based upon prior art made of record in the previous Office Action are withdrawn. Claims 1, 2, 10 and 18 have been amended. Claims 19-22 have been added. Claims 1-22 are pending.

Claim Objections

2. Claims 1 and 2 are objected to because of the following informalities: Examiner suggests changing "it" to -the beam—to clearly distinguish what "it" is. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1-3, 5-9, 11, 13-17 and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikushima et al. (U.S. Patent 4,199,222 newly cited) in view of Huber (DE 199 58 547 A1 previously cited).**

5. Regarding claims 1, 2, 5-7 and 13-15 Ikushima et al. discloses a device for automatically centering a laser beam in a light guide 3, such as a monomode or multimode optical fiber, this device comprising a scatterer (i.e. roughened end surface) including an entry face for the laser beam, the volume scatterer being configured to scatter the laser beam and automatically center the

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beam in the optical fiber. The volume scatterer is cylindrical (“has the same construction as the optical fiber”, column 1, lines 49-51) and comprises a light reflector (i.e. cladding glass layer, column 1, lines 51-54) surrounding a side face. Ikushima et al. further discloses a lens (e.g. 19) placed on the entry face of the scatterer.

6. Ikushima et al. does not expressly disclose a volume scatterer.

7. Huber discloses a means for coupling a light source comprising a roughened end surface. Huber also discloses that the roughened end surface may be replaced by a volume scatterer in the waveguide. See Abstract.

8. Ikushima et al. and Huber are analogous art as pertaining to input couplers.

9. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Ikushima et al to comprise a volume scatterer in place of the roughened end surface, since Huber discloses the two to be art recognized equivalents.

10. Regarding claims 8, 9, 16 and 17, Ikushima et al. discloses a lens (E.g. 18) on an entry face, but does not expressly disclose a defocusing lens on an entry face, a reflector protruding beyond an entry face, or an auxiliary fiber placed on the entry face of the volume scatterer. However, defocusing lenses (e.g. collimators) are well known in the art for improving optical coupling characteristics. Additionally, GRIN fiber collimators are known in the art as auxiliary fibers for improving input coupling. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a defocusing lens or an auxiliary fiber such as a GRIN fiber lens on the entry face to optimize optical coupling characteristics. Also, it would have been obvious to one having ordinary skill in the art at the

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time the invention was made to provide the reflector protruding beyond an entry face for the purpose of protecting the entry face from damage.

11. Regarding claims 19 and 20, Ikushima et al. in view of Huber does not expressly disclose the volume scatterer to be made from a material having an absorption coefficient that is as small as possible. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the volume scatterer of a material having a minimal absorption coefficient for the purpose of minimizing attenuation through the volume scatterer.

12. Regarding claims 3, 11, 21 and 22, Ikushima et al. in view of Huber discloses the claimed invention but does not expressly disclose the thickness of the volume scatterer is equal to at least 100 times the wavelength. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the appropriate thickness of the volume scatterer since it has been held that where the general conditions of a claim are disclosed by the prior art, discovering optimum or workable values involves only routine skill in the art.

13. **Claims 4 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikushima et al. in view of Huber as applied to claim 1 or 2 as applicable above, and further in view of Müller et al. (U.S. Patent 5,401,270 previously relied upon).**

14. Regarding claims 4 and 12, Ikushima et al. in view of Huber discloses the claimed invention but does not expressly disclose a polytetrafluoroethylene volume scatterer.

15. Müller et al. discloses a polytetrafluoroethylene volume scatterer.

16. Müller et al. is analogous art as pertaining to volume scatterers.

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17. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a polytetrafluoroethylene volume scatterer in the device of Ikushima et al.

18. One of ordinary skill in the art would have been motivated to make the modification in order to provide a cost effective device.

Allowable Subject Matter

19. Claims 10 and 18 are allowed.

20. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record does not disclose or suggest, either alone or in combination, the method of manufacturing the device in which a tubular light guide is used as a cutting punch.

Response to Arguments

21. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sarah Song whose telephone number is 571-272-2359. The examiner can normally be reached on M-Th 7:30am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on 571-272-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Sarah Song
Primary Examiner
Group Art Unit 2874